

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method comprising:
receiving a grade of service (GoS) factor and a quality of service (QoS) factor,
wherein the GoS factor specifies a maximum call blocking probability for
a link and the QoS factor specifies a maximum packet loss probability for
said link;
determining, for each of one or more candidate link sizes of said link, a plurality
of state probabilities based on the GoS factor and a plurality of marginal
packet loss probabilities based on the QoS factor, wherein said
determining is performed based on user behavior and traffic
characteristics;
determining, based on user behavior and traffic characteristics, a link size of said
link;
wherein determining said link size of said link comprises selecting one of the one
or more candidate link sizes of said link using the plurality of state
probabilities and the plurality of marginal packet loss probabilities; and
storing said link size of said link ~~amount~~ in memory;
wherein determining said link size of said link is based on a product of:
a state probability in the plurality of state probabilities, wherein the state
probability is a probability that a specified number of users are
using said link when a specified maximum call blocking
probability requirement is satisfied relative to said link; and
a marginal packet loss probability in the plurality of marginal packet loss
probabilities, wherein the marginal packet loss probability is a
probability that a packet is lost when said packet is sent through
said link that:
has a specified amount of bandwidth; and
is being used by said specified number of users.
2. (Original) The method of Claim 1, wherein said user behavior comprises an
average time between arrivals of calls made by one or more users using said link.

3. (Original) The method of Claim 1, wherein said user behavior comprises an average duration of calls made by one or more users using said link.
4. (Original) The method of Claim 1, wherein said traffic characteristics comprise an average time between arrivals of packets on said link.
5. (Original) The method of Claim 1, wherein said traffic characteristics comprise an average duration of periods during which packets are transmitted relatively continuously on said link.
6. (Previously Presented) The method of Claim 1, wherein determining said link size of said link is based on a specified number of users.
- 7-10. (Canceled)
11. (Previously Presented) The method of Claim 1, wherein each of the plurality of state probabilities is a probability that a specified number of users are using said link when a specified maximum call blocking probability requirement is satisfied relative to said link.
12. (Currently Amended) The method of Claim 1, wherein each of the plurality of marginal packet loss probabilities is a probability that a packet ~~will be~~ is lost when said packet is sent through said link that:
has a specified amount of bandwidth; and
is being used by a specified number of users.
13. (Canceled)
- 14-19. (Canceled)
20. (Currently Amended) A volatile or non-volatile computer-readable ~~storage~~ medium carrying one or more sequences of instructions, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:
receiving a grade of service (GoS) factor and a quality of service (QoS) factor,

wherein the GoS factor specifies a maximum call blocking probability for a link and the QoS factor specifies a maximum packet loss probability for said link;

determining, for each of one or more candidate link sizes of said link, a plurality of state probabilities based on the GoS factor and a plurality of marginal packet loss probabilities based on the QoS factor, wherein said determining is performed based on user behavior and traffic characteristics;

determining, based on user behavior and traffic characteristics, a link size of said link;

wherein determining said link size of said link comprises selecting one of the one or more candidate link sizes of said link using the plurality of state probabilities and the plurality of marginal packet loss probabilities; and

storing said link size of said link ~~amount~~ in memory;

wherein said link size of said link is determined based on a product of:

a state probability in the plurality of state probabilities, wherein the state probability is a probability that a specified number of users are using said link when a specified maximum call blocking probability requirement is satisfied relative to said link; and
a marginal packet loss probability in the plurality of marginal packet loss probabilities, wherein the marginal packet loss probability is a probability that a packet will be lost when said packet is sent through said link that:
has a specified amount of bandwidth; and
is being used by said specified number of users.

21. (Currently Amended) The volatile or non-volatile computer-readable ~~storage~~ medium of Claim 20, wherein said user behavior comprises an average time between arrivals of calls made by one or more users using said link.
22. (Currently Amended) The volatile or non-volatile computer-readable ~~storage~~ medium of Claim 20, wherein said user behavior comprises an average duration

of calls made by one or more users using said link.

23. (Currently Amended) The volatile or non-volatile computer-readable ~~storage~~ medium of Claim 20, wherein said traffic characteristics comprise an average time between arrivals of packets on said link.
24. (Currently Amended) The volatile or non-volatile computer-readable ~~storage~~ medium of Claim 20, wherein said traffic characteristics comprise an average duration of periods during which packets are transmitted relatively continuously on said link.
25. (Currently Amended) The volatile or non-volatile computer-readable ~~storage~~ medium of Claim 20, wherein determining said link size of said link is based on a specified number of users.
- 26-29. (Canceled)
30. (Currently Amended) The volatile or non-volatile computer-readable ~~storage~~ medium of Claim 20, wherein each of the plurality of state probabilities is a probability that a specified number of users are using said link when a specified maximum call blocking probability requirement is satisfied relative to said link.
31. (Canceled)
32. (Canceled)
33. (Currently Amended) An apparatus comprising:
means for receiving a grade of service (GoS) factor and a quality of service (QoS) factor, wherein the GoS factor specifies a maximum call blocking probability for a link and the QoS factor specifies a maximum packet loss probability for said link;
means for determining, for each of one or more candidate link sizes of said link, a plurality of state probabilities based on the GoS factor and a plurality of marginal packet loss probabilities based on the QoS factor, wherein said

determining is performed based on user behavior and traffic characteristics;

means for determining, based on user behavior and traffic characteristics, a link size of said link;

wherein determining said link size of said link comprises selecting one of the one or more candidate link sizes of said link using the plurality of state probabilities and the plurality of marginal packet loss probabilities; and

means for storing said link size of said link ~~amount~~ in memory;

wherein said link size of said link is determined based on a product of:

a state probability in the plurality of state probabilities, wherein the state probability is a probability that a specified number of users are using said link when a specified maximum call blocking probability requirement is satisfied relative to said link; and

a marginal packet loss probability in the plurality of marginal packet loss probabilities, wherein the marginal packet loss probability is a probability that a packet will be lost when said packet is sent through said link that:

has a specified amount of bandwidth; and

is being used by said specified number of users.

34. (Original) The apparatus of Claim 33, wherein said user behavior comprises an average time between arrivals of calls made by one or more users using said link.
35. (Original) The apparatus of Claim 33, wherein said user behavior comprises an average duration of calls made by one or more users using said link.
36. (Original) The apparatus of Claim 33, wherein said traffic characteristics comprise an average time between arrivals of packets on said link.
37. (Original) The apparatus of Claim 33, wherein said traffic characteristics comprise an average duration of periods during which packets are transmitted relatively continuously on said link.

38. (Currently Amended) The apparatus of Claim 33, wherein determining said link size of said link ~~amount~~ is based on a specified number of users.

39-42. (Canceled)

43. (Previously Presented) The apparatus of Claim 33, wherein each of the plurality of state probabilities is a probability that a specified number of users are using said link when a specified maximum call blocking probability requirement is satisfied relative to said link.

44. (Canceled)

45. (Canceled)

46. (Currently Amended) An apparatus comprising:
a network interface that is coupled to a data network for receiving one or more packet flows therefrom;
a processor; and
one or more stored sequences of instructions which, when executed by the processor, cause the processor to carry out the steps of:
receiving a grade of service (GoS) factor and a quality of service (QoS) factor, wherein the GoS factor specifies a maximum call blocking probability for a link and the QoS factor specifies a maximum packet loss probability for said link;
determining, for each of one or more candidate link sizes of said link, a plurality of state probabilities based on the GoS factor and a plurality of marginal packet loss probabilities based on the QoS factor, wherein said determining is performed based on user behavior and traffic characteristics;
determining, based on user behavior and traffic characteristics, a link size of said link;
wherein determining said link size of said link comprises selecting

one of the one or more candidate link sizes of said link
using the plurality of state probabilities and the plurality of
marginal packet loss probabilities; and
storing said link size of said link ~~amount~~ in memory;
wherein said link size of said link is determined based on a product
of:

a state probability in the plurality of state probabilities,
wherein the state probability is a probability that a
specified number of users are using said link when a
specified maximum call blocking probability
requirement is satisfied relative to said link; and
a marginal packet loss probability in the plurality of
marginal packet loss probabilities, wherein the
marginal packet loss probability is a probability that
a packet will be lost when said packet is sent
through said link that:
has a specified amount of bandwidth; and
is being used by said specified number of users.

47. (Original) The apparatus of Claim 46, wherein said user behavior comprises an average time between arrivals of calls made by one or more users using said link.
48. (Original) The apparatus of Claim 46, wherein said user behavior comprises an average duration of calls made by one or more users using said link.
49. (Original) The apparatus of Claim 46, wherein said traffic characteristics comprise an average time between arrivals of packets on said link.
50. (Original) The apparatus of Claim 46, wherein said traffic characteristics comprise an average duration of periods during which packets are transmitted relatively continuously on said link.

51. (Currently Amended) The apparatus of Claim 46, wherein determining said link size of said link amount is based on a specified number of users.

52-55. (Canceled)

56. (Previously Presented) The apparatus of Claim 46, wherein each of the plurality of state probabilities is a probability that a specified number of users are using said link when a specified maximum call blocking probability requirement is satisfied relative to said link.

57. (Canceled)

58. (Previously Presented) The apparatus of Claim 46, wherein determining said link size of said link is based on a product of:
a state probability in the plurality of state probabilities, wherein the state probability is a probability that a specified number of users are using said link when a specified maximum call blocking probability requirement is satisfied relative to said link; and
a marginal packet loss probability in the plurality of marginal packet loss probabilities, wherein the marginal packet loss probability is a probability that a packet will be lost when said packet is sent through said link that:
has a specified amount of bandwidth; and
is being used by said specified number of users.

59. (Canceled)